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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/722,995	11/26/2003	Weiping Zhao	02-3175	9562

8840 7590 09/22/2004

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EXAMINER

TSUKERMAN, LARISA Z

ART UNIT

PAPER NUMBER

2833

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/722,995

Applicant(s)

ZHAO ET AL.

Examiner

Larisa Z Tsukerman

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2 and 4-11 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Objections

Claim 1 is objected to because of the following informalities: after "female" in line 2, insert "terminal". Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action: The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1, 2, 4, 6, 7, 8 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Sakiyama (6616468).

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In regard to claim 1, Sakiyama discloses a female terminal 22 for use with a male terminal 12 in establishing an electrical power connection, the female terminal 22 comprising:

a main connector body (not marked and not shown) having an open inserting end (not marked, see Figs. 9 and 10) for receiving an inserting portion (not marked) of the male terminal 12, a main electrical interface being established upon completed insertion of the male terminal 12 and within an interior location of the female terminal 22;

at least one tab 82 (see Fig.8B) projecting from a location of the female terminal 22 and proximate the open inserting end, the tab 82 being contacted by the male inserting portion and prior to or subsequent of achieving the main electrical interface (see Col. 5, lines 9-21);

upon the occurrence of an electrical arcing event between the male and female terminals, an energy flow resulting from the event traveling from the male terminal through the projecting tab and at a location remote from the main electrical interface for both the male and female terminals (see Col. 5, lines 9-21 and 25-37).

In regard to claim 2, Sakiyama discloses the at least one tab 82 further comprising an angled and electrically connected tang 821 portion.

In regard to claim 4, Sakiyama discloses the main connector body 1 further comprising a rectangular shaped body (see Fig.8A and 8B), the male inserting portion 12 further comprising a rectangular shaped inserting blade (see Fig.1A).

In regard to claim 6, Sakiyama discloses a pair of Lorentz force inducing magnets 14a and 14b positioned on opposite facing sides of the main connector body and proximate the at least one contact tab at the open inserting end 9(see Fig. 1A).

In regard to claim 7, Sakiyama discloses multiple and interconnecting female and male terminals positioned between the magnets and according to a specified conventional array (see Fig.3).

In regard to claim 8, Sakiyama discloses that the female terminal 22 further comprising a configurable blank into which is formed the female terminal.

In regard to claim 11, Sakiyama discloses the female terminal comprising a coating of a material including at least one of **silver** (a nickel, ceramic, and gold) applied upon the at least one tab (see Col. 1, line 25-26).

Claims 1, 2, 4 are 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Miwa (6390839).

In regard to claim 1, Miwa discloses a female terminal 17 for use with a male terminal 15 in establishing an electrical power connection, the female terminal 17 comprising:

a main connector body 22 having an open inserting end (not marked, left end in Fig.3) for receiving an inserting portion 19,20 of the male terminal 15, a main electrical interface being established upon completed insertion of the male terminal 15 and within an interior location of the female terminal 17;

at least one tab 23 projecting from a location of the female terminal 17 and

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proximate the open inserting end (see Fig.3), the tab 23 being contacted by the male inserting 19,20 portion and prior to or subsequent of achieving the main electrical interface;

upon the occurrence of an electrical arcing event between the male and female terminals, an energy flow resulting from the event traveling from the male terminal through the projecting tab and at a location remote from the main electrical interface for both the male and female terminals.

In regard to claim 2, Miwa discloses the at least one tab 23 further comprising an angled and electrically connected tang 23c portion.

In regard to claim 4, Miwa discloses the main connector body 22 further comprising a rectangular shaped body (see Fig.3), the male inserting portion 19,20 further comprising a rectangular shaped inserting blade 9(see Fig.2).

In regard to claim 8, Miwa discloses that the female terminal 17 further comprising a configurable blank into which is formed the female terminal.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miwa (6390839).

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In regard to claim 5, Miwa discloses most of the claimed invention, except for the main connector body 22 further comprising a rounded and cylindrical shaped body, the male inserting portion further comprising a rounded and cylindrical shaped inserting pin.

With regard to claim 5: the main body and a pin having a rounded and cylindrical shaped, absent any criticality, is only considered to be an obvious modification of the shape the main connector body and the pin, as the courts have held that a change in shape or configuration, without any criticality, is within the level of skill in the art as the particular shape claimed by applicant is nothing more than one of numerous shapes that a person having ordinary skill in the art will find obvious to provide using routine experimentation based on its suitability for the intended use of the invention. See *In re Dailey*, 149USPQ 47 (CCPA 1976).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakiyama (6616468) in view of Jones (3815081).

In regard to claim 9, Sakiyama discloses most of the claimed invention, except for the female terminal 22 comprising elongated, twisted and angled beams extending along opposing interior faces of the connector body and along the main electrical interface. Jones teaches elongated, twisted and angled beams 26 adapted to exert a torsional force on the associated male contact for better electrical contact (see Abstract and Col.1, lines 31-37). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made and for the same reason to use twisted and angled beams of Jones in structure of Sakiyama.

Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakiyama (6616468) and Jones (3815081), as applied to claim 9, and further in view of Chaillot et al. (5951339).

Sakiyama and Jones include most of the claimed invention, except for the female terminal comprising a **pair of contact ribs** extending in opposing fashion within the connector body at the main electrical interface, the contact ribs providing against overstressing of the beams, as well as at least on rib providing current conducting through the female terminal. Chaillot et al. teaches a **pair of contact ribs** 55 extending in opposing fashion within the connector body at the main electrical interface, the contact ribs providing against overstressing of the beams to form a stop acting on the outer surface of the contact 29 so as to avoid any risk of exceeding the elastic limit of the contact 29. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made and for the same reason to use a **pair of contact ribs** of Chaillot et al. in structure of Sakiyama.

Allowable Subject Matter

Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


In regard to claim 3, Miwa discloses the tab 23 further comprising **a plurality of angled, twisted and electrically connected tang portions** arranged at specified locations along the open inserting end.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Larisa Z Tsukerman whose telephone number is (571)-272-2015. The examiner can normally be reached on Monday through Friday from 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A Bradley can be reached on (571)-272-2800 ex. 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LT, 09/14/2004


THO D.TA
PRIMARY EXAMINER